

LICE infestation (*Pediculus humanus*, *P. capitis*, *Phthirus pubis*)¹

	Drug	Adult dosage	Pediatric dosage
Drug of choice:	0.5% Malathion ²	Topically	Topically
OR	1% Permethrin ³	Topically	Topically
Alternative:	Pyrethrins with piperonyl butoxide ⁴	Topically	Topically
OR	Ivermectin ^{4,5,6}	200 mcg/kg PO	≥15kg: 200 mcg/kg PO

1. Pediculocides should not be used for infestations of the eyelashes. Such infestations are treated with petrolatum ointment applied 2-4x/d x 8-10d. Oral TMP/SMX has also been used (TL Meinking and D Taplin, Curr Probl Dermatol 1996; 24:157). For pubic lice, treat with 5% permethrin or ivermectin as for scabies (see Scabies page). TMP/SMX has also been effective when used together with permethrin for head lice (RB Hipolito et al, Pediatrics 2001; 107:E30).
2. Malathion is both ovicidal and pediculocidal; 2 applications at least 7 days apart are generally necessary to kill all lice and nits.
3. Permethrin and pyrethrin are pediculocidal; retreatment in 7-10d is needed to eradicate the infestation. Some lice are resistant to pyrethrins and permethrin (TL Meinking et al, Arch Dermatol 2002; 138:220).
4. Not FDA-approved for this indication.
5. Safety of ivermectin in young children (<15 kg) and pregnant women remains to be established. Ivermectin should be taken on an empty stomach with water.
6. Ivermectin is pediculocidal, but more than one dose is generally necessary to eradicate the infestation (KN Jones and JC English 3rd, Clin Infect Dis 2003; 36:1355). The number of doses and interval between doses has not been established, but in one study of body lice, 3 doses administered at 7-day intervals were effective (C Fouault et al, J Infect Dis 2006; 193:474).

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MANUFACTURERS OF DRUGS USED TO TREAT PARASITIC INFECTIONS

albendazole – <i>Albenza</i> (GlaxoSmithKline) – albendazole	§ <i>Impavido</i> (Zentaris, Germany) – miltefosine
<i>Alinia</i> (Romark) – nitazoxanide	iodoquinol – <i>Yodoxin</i> (Glenwood), others
<i>Ambisome</i> (Gilead) – amphotericin B, liposomal amphotericin B – <i>Fungizone</i> (Apothecon), others	itraconazole – <i>Sporanox</i> (Janssen-Ortho), others
amphotericin B, liposomal – <i>Ambisome</i> (Gilead)	ivermectin – <i>Stromectol</i> (Merck)
<i>Ancobon</i> (Valeant) – flucytosine	ketoconazole – <i>Nizoral</i> (Janssen), others
§ <i>Antiminth</i> (Pfizer) – pyrantel pamoate	† <i>Lampit</i> (Bayer, Germany) – nifurtimox
• <i>Aralen</i> (Sanofi) – chloroquine HCl and chloroquine phosphate	<i>Lariam</i> (Roche) – mefloquine
§ artemether – <i>Artenam</i> (Arenco, Belgium)	§ <i>Leshcutan</i> (Teva, Israel) – topical paromomycin
§ artemether/lumefantrine – <i>Coartem</i> , <i>Riamet</i> (Novartis)	levamisole – <i>Ergamisol</i> (Janssen)
§ <i>Artenam</i> (Arenco, Belgium) – artemether	lumefantrine/artemether – <i>Coartem</i> , <i>Riamet</i> (Novartis)
§ artesunate – (Guilin No. 1 Factory, People's Republic of China)	<i>Malarone</i> (GlaxoSmithKline) – atovaquone/proguanil
atovaquone – <i>Mepron</i> (GlaxoSmithKline)	malathion – <i>Ovide</i> (Medicis)
atovaquone/proguanil – <i>Malarone</i> (GlaxoSmithKline)	mebendazole – <i>Vermox</i> (McNeil), others
azithromycin – <i>Zithromax</i> (Pfizer), others	mefloquine – <i>Lariam</i> (Roche)
• <i>Bactrim</i> (Roche) – TMP/Sulfa	§ megliumine antimonate – <i>Glucantime</i> (Aventis, France)
§ benznidazole – <i>Rochagan</i> (Brazil)	† melarsoprol – <i>Mel-B</i>
• <i>Biaxin</i> (Abbott) – clarithromycin	† <i>Mel-B</i> – melarsoprol
§ <i>Biltricide</i> (Bayer) – praziquantel	<i>Mepron</i> (GlaxoSmithKline) – atovaquone
† bithionol – <i>Bitin</i> (Tanabe, Japan)	metronidazole – <i>Flagyl</i> (Pfizer), others
† <i>Bitin</i> (Tanabe, Japan) – bithionol	§ miconazole – <i>Monistat i.v.</i>
§ <i>Brolene</i> (Aventis, Canada) – propamidine isethionate	§ miltefosine – <i>Impavido</i> (Zentaris, Germany)
chloroquine HCl and chloroquine phosphate – <i>Aralen</i> (Sanofi), others	§ <i>Monistat i.v.</i> – miconazole
clarithromycin – <i>Biaxin</i> (Abbott), others	<i>NebuPent</i> (Fujisawa) – pentamidine isethionate
• <i>Cleocin</i> (Pfizer) – clindamycin	§ niclosamide – <i>Yomesan</i> (Bayer, Germany)
clindamycin – <i>Cleocin</i> (Pfizer), others	† nifurtimox – <i>Lampit</i> (Bayer, Germany)
<i>Coartem</i> (Novartis) – artemether/lumefantrine	nitazoxanide – <i>Alinia</i> (Romark)
crotamiton – <i>Eurax</i> (Westwood-Squibb)	<i>Nix</i> (GlaxoSmithKline) – permethrin
dapsone – (Jacobs)	• <i>Nizoral</i> (Janssen) – ketoconazole
§ <i>Draprim</i> (GlaxoSmithKline) – pyrimethamine USP	§ ornidazole – <i>Tiberal</i> (Roche, France)
† diethylcarbamazine citrate (DEC) – <i>Hetrazan</i>	<i>Ornidyl</i> (Aventis) – eflornithine (Difluoromethylornithine, DFMO)
• <i>Diflucan</i> (Pfizer) – fluconazole	<i>Ovide</i> (Medicis) – malathion
§ diloxanide furoate – <i>Furamide</i> (Boots, United Kingdom)	§ oxamniquine – <i>Vansil</i> (Pfizer)
doxycycline – <i>Vibramycin</i> (Pfizer), others	<i>Paludrine</i> (AstraZeneca, United Kingdom) – proguanil
eflornithine (Difluoromethylornithine, DFMO) – <i>Ornidyl</i> (Aventis)	paromomycin – <i>Humatin</i> (Monarch); <i>Leshcutan</i> (Teva, Israel; topical formulation not available in US)
§ <i>Egaten</i> (Novartis) – triclabendazole	<i>Pentam 300</i> (Fujisawa) – pentamidine isethionate
<i>Elimite</i> (Allergan) – permethrin	pentamidine isethionate – <i>Pentam 300</i> (Fujisawa), <i>NebuPent</i> (Fujisawa)
<i>Ergamisol</i> (Janssen) – levamisole	† <i>Pentostam</i> (GlaxoSmithKline, United Kingdom) – sodium stibogluconate
<i>Eurax</i> (Westwood-Squibb) – crotamiton	permethrin – <i>Nix</i> (GlaxoSmithKline), <i>Elimite</i> (Allergan)
• <i>Flagyl</i> (Pfizer) – metronidazole	§ praziquantel – <i>Biltricide</i> (Bayer)
§ <i>Flisint</i> (Sanofi-Aventis, France) – fumagillin	primaquine phosphate USP
fluconazole – <i>Diflucan</i> (Pfizer), others	§ proguanil – <i>Paludrine</i> (AstraZeneca, United Kingdom)
flucytosine – <i>Ancobon</i> (Valeant)	proguanil/atovaquone – <i>Malarone</i> (GlaxoSmithKline)
fumagillin – <i>Flisint</i> (Sanofi-Aventis, France)	§ propamidine isethionate – <i>Brolene</i> (Aventis, Canada)
• <i>Fungizone</i> (Apothecon) – amphotericin	§ pyrantel pamoate – <i>Antiminth</i> (Pfizer)
§ <i>Furamide</i> (Boots, United Kingdom) – diloxanide furoate	pyrethrins and piperonyl butoxide – <i>RID</i> (Pfizer), others
furazolidone – <i>Furozone</i> (Roberts)	§ pyrimethamine USP – <i>Draprim</i> (GlaxoSmithKline)
<i>Furozone</i> (Roberts) – furazolidone	<i>Qualaquin</i> – quinine sulfate (Mutual Pharmaceutical Co/AR Scientific)
† <i>Germanin</i> (Bayer, Germany) – suramin sodium	quinacrine
§ <i>Glucantime</i> (Aventis, France) – meglumine antimonate	* quinidine gluconate (Eli Lilly)
† <i>Hetrazan</i> – diethylcarbamazine citrate (DEC)	§ quinine dihydrochloride
<i>Humatin</i> (Monarch) – paromomycin	

(continued)

quinine sulfate – <i>Qualaquin</i> (Mutual Pharmaceutical Co/AR Scientific)	sulfadiazine – (Eon)
<i>Riamet</i> (Novartis) – artemether/lumefantrine	† suramin sodium – <i>Germanin</i> (Bayer, Germany)
• <i>RID</i> (Pfizer) – pyrethrins and piperonyl butoxide	§ <i>Tiberal</i> (Roche, France) – ornidazole
• <i>Rifadin</i> (Aventis) – rifampin	<i>Tindamax</i> (Mission) – tinidazole
rifampin – <i>Rifadin</i> (Aventis), others	tinidazole – <i>Tindamax</i> (Mission)
§ <i>Rochagan</i> (Brazil) – benznidazole	TMP/Sulfa – <i>Bactrim</i> (Roche), others
* <i>Rovamycin</i> (Aventis) – spiramycin	§ triclabendazole – <i>Egaten</i> (Novartis)
† sodium stibogluconate – <i>Pentostam</i> (GlaxoSmithKline, United Kingdom)	§ <i>Vansil</i> (Pfizer) – oxamniquine
* spiramycin – <i>Rovamycin</i> (Aventis)	• <i>Vermox</i> (McNeil) – mebendazole
• <i>Sporanox</i> (Janssen-Ortho) – itraconazole	• <i>Vibramycin</i> (Pfizer) – doxycycline
<i>Stromectol</i> (Merck) – ivermectin	• <i>Yodoxin</i> (Glenwood) – iodoquinol
	§ <i>Yomesan</i> (Bayer, Germany) – niclosamide
	• <i>Zithromax</i> (Pfizer) – azithromycin

* Available in the US only from the manufacturer.

§ Not available commercially. It may be obtained through compounding pharmacies such as Panorama Compounding Pharmacy, 6744 Balboa Blvd, Van Nuys, CA 91406 (800-247-9767) or Medical Center Pharmacy, New Haven, CT (203-688-6816). Other compounding pharmacies may be found through the National Association of Compounding Pharmacies (800-687-7850) or the Professional Compounding Centers of America (800-331-2498, www.pccarx.com).

† Available from the CDC Drug Service, Centers for Disease Control and Prevention, Atlanta, Georgia 30333; 404-639-3670 (evenings, weekends, or holidays: 770-488-7100).

• Also available generically.

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